

AUTOMATED APPARATUS AND METHOD FOR FRUIT TESTING

ABSTRACT OF DISCLOSURE

A fruit tester provides a motor driven intrusive plunger
5 with associated sensors to determine digital data indicative
of plunger position, force resisting plunger intrusion and
constant pressure creep. Sensor data is presented to a
computer for storage, analysis and feedback control of the
plunger. The plunger powering train includes a belt driven
10 ball screw translator to convert rotary to linear motion and
an "S" type stress block with plural bridge interconnected
strain gauges to sense pressure resisting intrusion to allow
accurate measurements. Methods of analysis are disclosed to
determine both resistance to plunger penetration and plunger
15 creep at fixed pressure, in each of at least two concentric
zones of a fruit, which are related by software for accurate
determination of fruit condition as a function of time, both
present and future.